

Amendment to the Drawings

A replacement sheet including figures 3 and 4 is being submitted herewith. Only figure 3 has been amended. The only change to figure 3 is that the reference numeral "37" has been changed to "38" to correspond to the specification's reference to the "loaded resist transfer pad 38" at page 5, line 11, *inter alia*.

Remarks

Section 102 Rejection

The Examiner rejected claims 1-3 under section 102(e) as being anticipated by Lille, 6,725,526. Applicants' have amended claim 1 to more clearly describe the invention as a structure with a separable coating of photoresist for transferring the photoresist to surface of a workpiece. In addition applicants have added new dependent claims 11-16 which depend from claim 1. Applicants have also added new independent claim 17 and claims 18-23 which depend from it.

The Examiner argued that applicants previous claims did not patentably distinguish over Lille's teaching because the limitation in the applicants' claims were only process limitations that were not relevant. Applicants disagree but the claims have been amended to clarify the invention and the distinction over Lille.

Applicants' claim 1 now includes "a transfer layer of polydimethylsiloxane with a separable coating of photoresist for applying to a surface of the workpiece" Lille has no comparable teaching. The use of polydimethylsiloxane in Lille is not for transferring a photoresist, so it follows that Lille does not teach the formation of a pad that includes a layer of polydimethylsiloxane with a separable layer of photoresist. Lille's polydimethylsiloxane layer is used a mold, not for the transferring of photoresist from one surface to another. Lille's description of figure 3 references "a molding or transfer film on the master structure." (See col. 3:4-8).

Lille also states:

A layer of a material, for example, elastomeric polydimethylsiloxane, also known as PDMS (SYLGARD 184, Dow Corning) is formed on the master (for example, by a spin-on process) and conforms to the surface that includes the inverse image of the membrane structure. ... A replica (transfer film 14) of the master silicon surface is thus formed. FIG. 3 shows a side view of a master 13 including an inverse image 18, and the transfer film 14 of the PDMS material. ...

As illustrated in FIG. 4, the transfer film 14 is removed from the master 13 and a resin-polymer film 16 is then coated on the transfer film 14 to fill the image of the membrane structure 18 in the transfer film 14. (col. 4:53 through col. 5:10).

Thus, it is clear that Lille is not teaching the use of a structure with a separable layer of photoresist on a layer of polydimethylsiloxane as applicants claim. Lille and applicants are using the word "transfer" in a completely different way. It is clear from applicants' specification and the claim language that the structure that applicants claim is designed to transfer (apply) a photoresist to a surface of a workpiece. Applicants have clarified the claim by adding that the photoresist on the layer of polydimethylsiloxane is separable. Lille is describing the transferring of a patterned image, not the photoresist itself.

In addition, applicants claim a cushion layer attached to the transfer layer and providing flexible support for the transfer layer. It is respectfully submitted that the Examiner incorrectly equated Lille's "sacrificial layer" with applicants' cushion layer. The Examiner referenced the paragraph of Lille starting at col. 2, line 38 which reads as follows:

Embodiments also include a method for forming a head suspension assembly, including forming a sacrificial layer in or on a portion of a substrate. A transfer film is formed across the substrate. A patterned photoresist layer is formed on top of the transfer film. The method also includes transferring the image of patterned photoresist layer through the transfer film, and removing the patterned photoresist layer. In addition, the sacrificial layer is removed to form a cavity extending a distance into the substrate.

The foregoing shows again that Lille is not teaching transferring a separable photoresist to a workpiece. Lille's sacrificial layer 12 is shown in various figures but the Examiner has failed to cite any reference to Lille's teaching the use of the sacrificial layer 12 as a cushioning layer for the polydimethylsiloxane layer. In fact, applicants can find no teaching in Lille that relates the sacrificial layer 12 to

polydimethylsiloxane layer. In the various figures in Lille these layers are not adjacent.

In addition, the term "cushion layer" has a meaning in the applicants' specification that the Examiner appears to fail to take into account when applying the claim to Lille. The applicants' state that the cushion layer "is designed to provide flexible support so that the resist transfer pad will tend to conform to the large scale topography of the target surface and smooth out local irregularities." (p. 14, lines 13-15.) The Examiner's comparison of Lille's sacrificial layer with applicants' claimed cushion layer fails to take into account the meaning of the language in context of the claim. Lille does not teach the sacrificial layer as providing any cushioning function; therefore, asserting that Lille teaches a cushion layer as applicants claim is not correct.

Dependent claim 3 further distinguishes over Lille by reciting that the cushion layer is "silicone rubber." The Examiner states without supporting citation that Lille's silicon wafer may contain "silicon rubber." First, the claim is for "silicone rubber" not "silicon rubber" as the Examiner incorrectly states. Second, as noted above the Examiner has stated that it is Lille's sacrificial layer that was being equated to applicants' cushion layer; therefore, the switch to the silicon wafer for the silicone rubber aspect of the claim is inconsistent with the previous grounds for rejecting claim 1. Lille's sacrificial layer is described as a metal such as copper. (See col. 4:30-34; and claims 2 and 17-18). Third, the applicants respectfully submit that the Examiner is mistaken about the nature of the pure silicon wafers used in semiconductor processing. If the Examiner has a reference for the assertion silicon wafers as used by Lille contain "silicon rubber," it should be cited. If the Examiner is using personal knowledge, then Examiner's affidavit is hereby requested. However, even if Lille's silicon wafer somehow includes "silicone rubber" the Examiner's argument for this rejection is still incorrect for the reasons given above.

In applicants' previous version of dependent claim 2 a stiffener layer described as "attached" to the cushion layer was added. In the amendments above the word "attached" has been changed to "adjacent." The Examiner

previously equated applicants' stiffener layer to Lille's silicon wafer, but the silicon wafer is not adjacent to the sacrificial layer in Lille.

In applicants' new dependent claim 11 the structure of claim 1 is limited to transfer layers approximately from 10 to 100 microns thick. In applicants' new dependent claim 12 the cushion layer is approximately from 0.5 to 3.0 mm thick. In applicants' new dependent claim 13 the cushion layer is silicone rubber approximately 0.5 to 3.0 mm thick. Similarly in claim 14 the stiffener layer is approximately 0.1 to 1.0 mm thick.

New dependent claim 15 depends from claim 1 and adds a cover-tape attached to the cushion layer opposite to the layer of photoresist. The cover-tape is stated to be larger in area than the cushion layer and extending beyond at least first and second edges of the cushion layer.

New dependent claim 16 includes a stiffener layer attached to the cushion layer, and a cover-tape attached to the stiffener layer opposite to the layer of photoresist.

New independent claim 17 is directed at the embodiment of the invention in which at least two pads with a layer of photoresist are disposed on a cover tape. Dependent claim 22 recites that the cover-tape and photoresist pads are formed into a roll.

Applicants respectfully submit that the amended and new claims are believed to clearly distinguish over the Lille reference. Allowance is hereby requested.

Respectfully submitted,



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